

21 air by a throttle valve is needed. In such case, care must be taken to provide a smooth transition during the transient period from the unthrottled control to the throttled control or vice versa without any shock due to a torque change. Undesired torque change might take place during such transient period due mainly to a considerable difference in response performance between the two controls.

Please replace the paragraph starting on page 7, line 13 and ending on page 7, line 30 with the following:

C2 MPU 106 communicates with various actuators of engine 12 via output ports 118. Actuators may control ignition timing or spark SPK, timing and metering of fuel FIN, position of throttle valve TVA to control air inflow, intake valve timing (IVT) to control intake air into the combustion chamber and exhaust valve timing (EVT). In the operation range where throttled intake air control is required, the position of throttle valve 44 is variably adjusted by an actuator in the form of a motor 45 to control intake air into combustion chamber 16 and intake valve closure (IVC) timing is adjusted by EMD 86 to provide a valve opening duration in the neighborhood of the least duration. In the operation range where unthrottled intake air control is required, IVC control is performed and the position of throttle valve 44 is adjusted so as to maintain boost pressure within the intake manifold at a target negative pressure value. In IVC control, intake valve closure (IVC) timing is variably adjusted to control intake air into the combustion chamber 16 without relying on throttling of airflow by throttle valve 44.

Please replace the paragraph starting on page 8, line 25 and ending on page 8, line 30 with the following:

C3 In the preferred embodiment, MPU 106 executes instructions stored in computer-readable media 110 to carry out a method for intake air control to communicate with the EMD 34 for intake valve 32 and the motor 45 for throttle valve 44 for unthrottled intake air control in coordination with throttled intake air control.

Please replace the paragraph starting on page 13, line 3 and ending on page 13, line 9 with the following: